



CITY OF SEATTLE

SUSTAINABLE BUILDING ACTION PLAN

**Recommendations to Promote
Sustainable Design and Construction Efforts
in the City of Seattle**



April 15, 1998

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EXECUTIVE SUMMARY

“Sustainable building” is the notion of designing, constructing, and operating buildings and landscapes in a manner that minimizes environmental impacts. It incorporates energy efficiency, water conservation, waste minimization, pollution prevention, resource-efficient materials, and indoor air quality in all phases of a building’s life.

Designing and constructing buildings in a more “sustainable” manner not only conserves valuable natural resources, but also provides economic and health benefits to building owners, occupants and the community at large. The City of Seattle has, for several years, provided a variety of conservation programs aimed at the design and construction industry. These include technical assistance, incentives, and educational programs in the areas of energy efficiency, water conservation, pollution prevention, and solid waste management. Initially, these programs were generally offered in a fragmented manner, with each department providing its own set of programs independent of other departments. Although these programs have been successful, and although some integrated programs have recently been offered, much more can still be done to transform the market in order to make sustainable building the standard practice in the city of Seattle.

In May 1997, a Task Force and Advisory Group was formed to develop the *Sustainable Building Action Plan* for the City of Seattle. The Task Force and Advisory Group were composed of representatives from City departments, the private sector and other government agencies that play a role in the building industry. This document is the product of their work and serves as an action plan to promote sustainable design and building on all new construction and major renovation projects that take place in the city.

Although construction activities are not confined to the city of Seattle limits, the package of recommendations in this Action Plan primarily includes policies and programs that the City of Seattle can undertake -- only one recommendation specifically calls for regional cooperation. In addition, this document does not include action items that the private sector could implement. These omissions are deliberate. This short-term project was narrowly defined and charged with developing a set of recommendations that City government could control and implement. Clearly, cooperation with the private sector and other jurisdictions is critical to sustainable building efforts.¹

This Action Plan is intended to be a policy paper for City decision makers: the Executive, City Council, department heads, and City managers. Some of the recommendations listed entail minimal costs and could proceed without high level authorization, while others require a significant investment by the City and may not be implemented until the next budget cycle. The Task Force and Advisory Group believe that the entire package of recommendations needs to be implemented in order to affect real, large-scale change in the way the building industry conducts business.

¹ In 1998 the City will work with the private sector and other cities to develop a regional sustainable building plan for the Pacific Northwest.

I. INTRODUCTION



The City of Seattle prides itself on being a leader in environmental issues. Over the past several years, the City has received national attention and awards for its progressive energy efficiency, water conservation and recycling programs. The City has also become increasingly aware of the importance of sustainable building efforts in the overall scheme of environmental stewardship.

The building industry is the nation's largest manufacturing activity, representing more than 50 percent of the nation's wealth and 13 percent of the Gross Domestic Product.² In addition, buildings account for one-sixth of the world's freshwater withdrawals, one-quarter of its wood harvest, and two-fifths of its material and energy flows. Structures also impact areas beyond their immediate location, affecting watersheds, air quality, and transportation patterns of communities.³ Given that buildings consume a significant amount of resources during their construction and occupancy, Seattle has a vested interest in ensuring that buildings are designed and constructed in an environmentally responsible manner.

"Sustainability" describes the ability to meet the needs of the present without compromising the ability of future generations to meet their needs. "Sustainable building" (also referred to as "resource-efficient" or "green building") is the notion of designing, constructing, and operating buildings and landscapes in a manner that minimizes environmental impacts. It incorporates energy efficiency, water conservation, waste minimization, pollution prevention, resource-efficient materials, and indoor air quality in all phases of a building's life. Building in a sustainable manner usually means exceeding codes or standard practices. Although meeting the current energy and plumbing codes certainly enables a building to be more resource-efficient than one built 50 years ago, much more can still be done. In some cases, such as solid waste management and irrigation, few if any requirements or minimal performance standards exist.

Sustainable building is an important component within the larger framework of sustainable development. The difference between the two concepts is as follows: sustainable building is more narrowly focused on individual buildings (how a building or landscape is designed and built), whereas sustainable development more broadly addresses issues affecting entire communities, such as land use and transportation.

² National Science and Technology Council, Subcommittee on Construction and Buildings, *Preliminary Report* (Washington D.C., 1993).

³ *Worldwatch Paper 124*.

II. BENEFITS OF SUSTAINABLE BUILDING & THE CITY'S ROLE

As noted earlier, buildings use a tremendous amount of resources during their construction and their occupancy. Designing and constructing buildings in a sustainable manner reduces energy and water use, reduces solid and hazardous waste, prevents indoor and outdoor pollution, and uses materials more efficiently. In turn, energy, water, and material efficiency can save the building owner and/or tenant money by reducing utility bills. Furthermore, resource conservation reduces the need for new power plants, water supplies, and landfills, thus benefiting the City of Seattle and its residents.

Numerous case studies also indicate that sustainably designed buildings can result in human health benefits. Daylighting, reduction of toxic products, and other resource-efficient measures have been shown to increase worker productivity, reduce sick leave and provide a more comfortable working and living environment. Financially, these benefits are usually far greater than the savings from utility bills.

City of Seattle departments offer a variety of conservation programs to the building industry and have done so for several years. For example, some programs offer financial incentives to offset the higher equipment costs of energy and water conserving technologies. The rationale is that the City will receive a high rate of return on its investment through reduced water and energy use during the life of the building.

The recommendations outlined in this document augment the activities already implemented by City departments. They only include policies and programs that the City of Seattle could undertake to facilitate sustainable building. That is not to say that City government is solely responsible for promoting these efforts. Clearly, the private sector, other government agencies, and individuals also play a key role in getting sustainable building into the mainstream; and partnerships between the City and these groups are vital. However, the purpose of this Action Plan is to only identify those items that the City of Seattle can control and implement. The City's role is to move the market in a direction that benefits the environment, building industry and the community. The recommendations outlined in the following pages attempt to raise aware-ness about sustainable building and its benefits; provide the industry with the information, tools and incentives to put sustainable building concepts into practice; recognize and reward successful projects; and lead the effort by example. Once sustainable building is more widely accepted and practiced, the City can begin to step aside and allow market forces to continue on their own.

Many of the recommendations in this Action Plan require a financial investment from the City of Seattle. As with the existing City conservation programs, the City of Seattle should see a return on its investment, via water, energy and waste reduction, within an acceptable time frame.⁴ In addition to reducing costs to City government, these practices will have a positive impact on the community as a whole, as described above. Consequently, it is in the interest of the entire city to invest in sustainable building.

⁴ A cost-benefit analysis has not been calculated for these recommendations. However, this would be the first step in developing a new City program.

III. BACKGROUND



CURRENT SUSTAINABLE BUILDING ACTIVITIES

The City of Seattle currently offers a number of conservation programs to the design, construction and landscaping industry. The following are just a few of many such examples:

- ❖ City Light's *Built Smart Program* and *Energy Smart Design Program* - *Built Smart* provides incentives and services on new multi-family buildings that build to higher standards than the current Energy Codes, and also provides solid waste and water conservation consultations. The *Energy Smart Program* provides incentives and technical assistance on commercial and industrial projects.
- ❖ Seattle Public Utility's (SPU) *Water Smart Program* - Provides commercial customers with technical assistance and financial incentives to install water conservation technologies.
- ❖ The Business and Industry Recycling Venture's (BIRV) *Waste Management Technical Assistance Program* - Under a contract with Seattle Public Utilities, the BIRV provides technical assistance to the building industry on ways to reduce, reuse and recycle construction materials and to use resource-efficient products.
- ❖ Environmental Management Initiative (EMI) - EMI is developing an Energy and Water Conservation Policy which would require new City facilities and landscapes to be designed, constructed and operated to be state-of-the-art water and energy efficient.

The City of Seattle is also involved in a number of regional efforts to promote resource conservation in the building industry. City departments collaborate with various regional organizations, including the Northwest Energy Efficiency Alliance, the Water Conservation Coalition, and the Construction, Demolition and Landclearing Council. Recently, the City received a grant from the Urban Consortium Energy Task Force to develop a regional action plan to promote sustainable building in the Pacific Northwest.

In addition to City activities, the private sector has also initiated a variety of sustainable building programs. For example, there is a growing field of consultants and architects who specialize in sustainable design, and a few construction companies that have full-time staff whose expertise is sustainable construction. Today, many large construction and demolition companies recycle their construction debris on a regular basis. And trade organizations, such as Associated General Contractors and the American Institute of Architects, offer workshops on sustainability.

Beyond the City of Seattle limits, sustainable building activities are prevalent in many other jurisdictions. Perhaps the most widely recognized program is the City of Austin's *Green Builder Program* which provides sustainable building guidelines for residential and commercial buildings. In Santa Barbara, developers can have their building permits expedited if they include resource-efficient measures on their projects. The US Green Building Council, a national non-profit organization, has

developed a sustainable building certification program for commercial and institutional projects. These large-scale efforts reinforce the idea that sustainable building is important on both a local and national level.

In general, most City conservation programs that are targeted at the construction industry are focused on a specific issue. For example, City Light's Energy Smart Program is primarily aimed at energy efficiency in commercial buildings and SPU's Water Smart Program is geared mainly towards water conservation in commercial buildings. A few recent programs take a more integrated approach, and include more than one conservation issue. For example, City Light's Built Smart Program incorporates energy efficiency, water conservation, and solid waste management requirements. And the *Best Management Practices Handbook for Resource-Efficient Schools*, developed by SPU and City Light, provides guidelines for half-a-dozen resource-efficiency issues.

In addition to recognizing the value of integrating the efforts of City utilities, it has also become clear that the utilities need to work with other City departments to promote sustainable building efforts. The Department of Construction and Land Use, the Department of Housing and Human Services, and many other departments are also key stakeholders in sustainable building. It is also critical that the City work more closely with the private sector and other government agencies, both locally and regionally, on these issues. In essence, cooperation is the key element in successfully promoting sustainable building activities.



SEATTLE'S SUSTAINABLE BUILDING ACTION PLAN

Despite the City of Seattle's successful programs, and despite the recent trend to provide more integrated conservation programs to the building industry, sustainable building is not yet *the* standard building practice in the city. This is true for City-funded, other government, and private sector construction projects that take place within the city limits. In general, most construction projects in Seattle utilize traditional building practices. That is, most projects simply strive to meet the energy and other building codes. Although Seattle has stringent energy and plumbing codes, additional measures can be taken to conserve more resources on a project. And some sustainability issues, such as irrigation and waste reduction, lack any performance standards or requirements.

There are a number of reasons why sustainable building is not yet the standard practice. Higher first costs, perceived risks, lack of information about the latest available technology and lack of information about City incentive programs are only a few of the barriers to sustainable building. Developers, architects, contractors and other key players face a variety of challenges in implementing sustainable building practices. Recognizing this, the City embarked upon an ambitious initiative – development of a *Sustainable Building Action Plan* for the City of Seattle. The goals of this Plan are to: **(1) Identify the main barriers to sustainable building within the City of Seattle; and (2) To identify a set of recommended strategies that the City can undertake to overcome these barriers.** If implemented, the strategies outlined in the Plan should do much to further the efforts of sustainable building on a large scale in the City.



PARTICIPANTS AND PROCESS

In May 1997, a Task Force and Advisory Group was formed to develop the *Sustainable Building Action Plan* for the City of Seattle. The Task Force and Advisory Group were composed of representatives from City departments, the private sector and other government agencies that play a role in the building industry. Included were representatives from City Light, Construction and Land Use, the Planning Commission, Housing and Human Services, architectural firms, construction companies, development companies, and engineering firms. A complete list of the Task Force and Advisory Group members can be found in the appendix.

Over a period of 7 months, the Task Force met regularly to develop the contents of the Action Plan. In addition, there were several joint Task Force-Advisory Group meetings, and Advisory Group members were invited to participate in Task Force meetings. At these meetings, the group developed a vision statement for sustainable building and mission statement for this project; identified the main barriers to sustainable building on all types of construction projects in Seattle; identified some solutions to overcome the barriers; and developed an implementation plan for the priority solutions.

The body of this document contains the conclusions and recommendations that came out of the Task Force and Advisory Group meetings. In addition to the Task Force and Advisory Group, the document was also reviewed by a larger group of City staff and industry representatives.



IV. VISION AND MISSION STATEMENTS

The Task Force and Advisory Group first developed a vision statement and mission statement. The vision statement describes the long-term vision for sustainable building in the City of Seattle, while the mission statement defines the objectives for this project -- the *Sustainable Building Action Plan*.



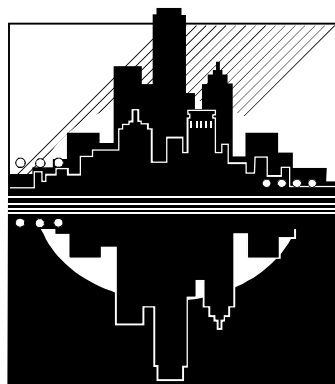
VISION STATEMENT

To enable building and landscape design and construction to join the highest positive regard for our quality of life with the least ecological consequences to our natural environment for current and future generations.



MISSION STATEMENT

To identify the barriers and incentives for private and public sector sustainable design and construction; to prioritize and recommend policies and programs for the City of Seattle in response to these; and to provide the ideas and strategies that can guide the City's implementation.



V. IDENTIFICATION OF MAIN BARRIERS

After defining the vision and mission statements, the group identified numerous obstacles to sustainable building. The following is a list of the main obstacles, grouped into three categories: Information, Regulations & Processes, and Incentives:

INFORMATION BARRIERS



There is no consensus as to what “sustainable building” means, what the minimum performance standards are, what activities are environmentally stressful, what the economics are, and how to evaluate or measure it.

Ask any two people to define “sustainable” or “green building” and you will probably get two different responses. Some regard meeting the energy code as building sustainably while others regard this as simply meeting the absolute minimum requirements. Some published definitions of sustainable building are vaguely defined and left to interpretation. Without an accepted, specific, working definition of sustainable building, it is difficult to promote the concept, identify goals, and measure the results.

There is no public policy defining why sustainable building benefits the City of Seattle and promotes the public good; and there is a lack of success in effectively communicating the benefits of sustainable building to the industry.

Sustainable building is more than doing the “environmentally right thing”. Using resources more efficiently also provides economic benefits to the city, the building industry, and building occupants. Sustainably designed buildings further provide for a more comfortable and healthier environment, resulting in increased productivity and reduced sick leave. All tangible benefits pertaining to all stakeholders need to be defined and communicated in order to effectively promote sustainable building on a large scale.

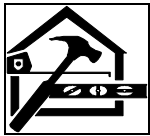
The vast amount of information currently available has not been successfully integrated and effectively disseminated or promoted.

A tremendous amount of information on green building already exists. There are numerous publications, web sites, databases, products, incentive programs, and other information around the City, country and the world. However, most of the information is dispersed, and few architects, developers, project managers, and others have the time or money to conduct the necessary research.

Bad experiences and poor product performance from the past deter people from incorporating sustainable building practices today.

Some resource-efficient products that have been introduced in recent years have not performed as well as expected. One commonly heard complaint is the need to flush twice with low-flow toilets. Although this is true for some models, there are many other models that perform very well. Consumers need to be informed about what product features to look for in a toilet. Another example is plastic lumber. When first produced, plastic lumber failed to perform in some applications. Today, however, the product has been reengineered and greatly improved. Nonetheless, because of poor past performance there is still a misperception about the quality of plastic lumber.

**REGULATORY
& PROCESS
BARRIERS**



There is a perceived and real inconsistency between sustainable building practices and codes and regulations.

Because of the numerous sets of codes, regulations and requirements that apply to the building industry, it is not surprising that some may be inconsistent with the goals of sustainable building. Some of these may be perceived (but not real) inconsistencies due to a lack of understanding or misinterpretation of the regulation/requirement. Others may be real inconsistencies due to an attempt to meet a different set of goals. For example, in downtown Seattle it is often prohibitively expensive to obtain a street-use permit on a construction project. As a result, the project is unable to site additional containers to recycle construction debris.

It is unclear from the various codes and regulations whether sustainable building is a priority for the City, and if it is, there is a lack of information as to how to achieve sustainable buildings and landscapes.

Because various codes, regulations and processes were established by various agencies to meet a variety of goals, it is not clear from existing codes, regulations and processes whether sustainable building is a priority issue for the City. Nor is it clear how sustainable building goals are to be achieved on a holistic level.

There are few if any benchmark standards or minimum performance standards for certain sustainable building issues.

Because some sustainable building issues, such as irrigation and job-site recycling, are not currently required, the minimum performance standards are undefined.

INCENTIVE BARRIERS



There is a lack of information about the inherent long-term economic benefits of sustainable building.

Many of the benefits of incorporating sustainable design and construction elements occur during the life of the building, such as reduced energy use and thus reduced utility bills. Other benefits take the form of reduced worker sick leave and lower operation and maintenance costs. These long-term savings should be, but usually are not, considered so that the entire life-cycle costs of the building are determined.

The reality is that first cost is the overriding concern among financial institutions, investors, etc.

Even if project managers choose to look at life-cycle costs with resulting higher first costs, they may not be able to secure larger loans for their project.

There is a lack of integration among various incentive programs (rebates, loans, technical assistance, and recognition programs), and a lack of understanding about how to apply and receive incentives.

The City currently offers several incentive programs to the building industry. However, many people are unaware of the variety of programs offered. Furthermore, most programs are dispersed among various departments -- there is no one-stop-shopping for City incentive programs, and those applying for incentives in one department are often not informed about incentives offered by other departments. Some programs require a significant amount of paperwork and a slow turn-around time, making them somewhat intimidating and less attractive to prospective applicants, especially first-time users.

Most current incentive programs are aimed at the developer, not at the people designing and constructing the building.

A single building project can employ dozens of consultants and contractors (architects, general contractors, sub-contractors, landscape architects, etc.). Each group, particularly those on the design team, can influence the way the building and landscape is designed and constructed. However, most financial incentive programs are targeted at the developer, thereby providing little incentive to those carrying out the work to build more sustainably.

The building industry faces a tremendous amount of risk (regulations, finances, public opinion) and is constantly managing that risk. Sustainable building is often perceived as an additional risk.

Asking the industry to design and build in a more sustainable manner is asking the industry to change the way it fundamentally does business. Change is difficult for anyone, but it is particularly difficult for an industry that, by necessity, is conservative because of all the risks it faces.

Utility rates in Seattle are low and can be a disincentive to any sustainable building practices that raise first costs.

Relative to other parts of the country, Seattle's electrical energy and water rates are very low. As a result, the payback period for incorporating some of these resource-efficient measures can be prohibitively long. Thus, practices which may be cost-effective in some parts of the country and the world may not be cost-effective in Seattle.

VI. OVERALL RECOMMENDATIONS

No single activity or policy will move sustainable building efforts to the point where it becomes common, everyday practice in Seattle. In addition, the current approach will not be able to transform the market as quickly as possible. Rather, what is needed is for the City to implement a package of new initiatives to overcome the barriers described in the preceding pages. The following recommendations recognize that different strategies appeal to different segments of the market. Some building professionals simply need the right technical information to change their design practices, while others need an incentive to change the way they normally do business.

The recommendations outlined below are not listed in terms of priority. The Task Force and Advisory Group believe each recommendation is equally essential to effectively promote sustainable building. Looking at this package of initiatives as a whole, a timeline has been laid out to show the preferred sequence of events (page 27). It may be appropriate for the recommendations to be implemented in an incremental fashion, with the low-budget or no-budget items occurring first, followed by the larger budget items in subsequent years.

The first recommendation calls for the development of a sustainable building **Primer** -- a simple document which defines sustainable building, how to get there via the City's incentive programs, and why it is important. A critical component of the primer will be to develop sustainable building performance guidelines (part of the "how to" portion of the document).

The next recommendation is for the City to adopt a **sustainable building policy** for all new City-funded construction projects. This could be accomplished by requiring the use of the Primer's performance guidelines or using other existing guidelines, such as the criteria developed by the US Green Building Council.

Once a common foundation has been established by the Primer, the City should **review codes**, regulations and other requirements that pertain to the building industry. The purpose of this would be two-fold: 1) To identify codes that are perceived barriers to sustainable building and clarify that they are not real barriers; 2) To identify, evaluate and recommend appropriate changes to codes which conflict with sustainable building.

In addition to ensuring that regulations do not impede sustainable building efforts, the City should provide the industry with the tools to put sustainable building ideas into action. One method is to create a **Resource Center** to make information more accessible to those conducting research on green building products, technologies and practices. A wealth of information about sustainable building already exists but is scattered among hundreds of companies, agencies and other organizations throughout the world. One-stop-shopping for this information is an item that the Task Force strongly recommends.

Education and outreach is also key to getting sustainable building into the mainstream. Workshops, seminars, and other education of City staff (e.g. building inspectors) and industry professionals need

to continue and expand. For many, this education will be an introduction to sustainable building ideas, while for others it will provide the latest information to continually do better.

The City should also continue to provide financial **incentives** to the building industry in order to move the market. Although a life-cycle cost analysis usually validates the long-term cost-effectiveness of a sustainably designed project, green building practices often increase up-front costs. As a result, some developers and builders may need an incentive to incorporate resource-efficient technologies in their projects. In addition, upon review of the existing codes, the City may want to consider offering new incentives to developers and other team members (such as contractors and architects).

Marketing the Primer, Resource Center, educational and incentive programs is vital to their success. The marketing campaign should create a “brand” or identity for sustainable building to incorporate this concept into everyday life for the building industry and the general public. As part of the marketing effort, the City should recognize, **reward** and publicize outstanding projects. This could happen in conjunction with a sustainable building conference or existing awards program.

Finally, to keep pace with constantly changing technologies and regulations, and to continually raise the bar, the Primer’s performance guidelines should be **evaluated** and modified on a biennial basis. At some point, sustainable building may become so mainstream that the guidelines will not be necessary. In addition, if the other City initiatives, such as the educational and incentive programs, are successfully implemented, they too should be assessed biennially to determine whether they should continue, be modified, or replaced with new initiatives. Again, once sustainable building becomes more accepted and practiced, many of the City programs may be retired.

VII. SPECIFIC RECOMMENDATIONS

The following describes the Task Force and Advisory Group's recommendations in greater detail. Timelines and costs have been estimated for each recommendation. The estimated costs do not include costs associated with City staff time, but an estimation of the amount of City staff time required to do the work is provided.

Recommendation 1 PRIMER



Develop a local sustainable building Primer to serve as a common roadmap for public and private projects in Seattle.

A large volume of information on sustainable building has already been produced by the City and other organizations. What is now needed is a simple document that is appropriate for Seattle, is acceptable to policy makers, and includes the following:

- A definition of sustainable building
- Benefits to the City government, the industry and community
- Principles of sustainable building
- Performance guidelines
- Information about City resources and incentive programs
- Case study summaries

As a tool to encourage developers and their teams to maximize resource efficiency, the primer needs to explain what sustainable building means, how it can be achieved, why the industry should do it, and how others have done it. The performance guidelines should be presented in an integrated manner to stress the importance of taking a holistic approach to design and construction. Also important is a description of how City incentive and technical assistance programs and other resources can help the industry meet the performance guidelines -- a roadmap to the ultimate destination.

Preferred Strategy

Form a small subcommittee out of the Task Force (with a City staff member or BIRV staff⁵ as the lead) to develop the Primer by researching existing information, drafting the document, and circulating it to the Task Force, Advisory Group and other key players for review. Provide some discretionary funds to hire a consultant to assist on the project if necessary. Have the Primer professionally

⁵ The BIRV (Business and Industry Recycling Venture) is under contract with the Seattle Public Utilities to implement a variety of sustainable building programs. This task could be included in their scope of work.

edited and published. Recognize the Primer as a formal, public document by passing a City Council resolution, ordinance, or other appropriate decree.

Develop the Primer in hard copy form and produce a brochure to serve as an order form and promotional piece. In addition, include the Primer on the City's website and develop other resource-conserving means of distributing the Primer to the industry and general public.

Timeline: 6-8 months
Est. Cost: \$10,000 (editing, printing, graphic design, distribution); \$5,000 (consultant)
City Staff: 0.25 FTE (lead); 0.15 for 1-3 FTEs (subcommittee)

Alternative Strategy

Hire a consultant to develop the Primer by researching existing information, drafting the document, and circulating it to the Task Force, Advisory Group and other key players for review. Professionally edit and publish the Primer. Have the City recognize the Primer as a formal, public document by passing a City Council resolution or other appropriate decree.

Develop the Primer in hard copy form and produce a brochure to serve as an order form and promotional piece. In addition, include the Primer on the City's website and develop other resource-conserving means of distributing the Primer to the industry and general public.

Timeline: 6-8 months
Est. Cost: \$20,000 (consultant)
City Staff: 0.10 FTE (proj mgr); 0.05 for 1-2 FTEs (oversight)

Recommendation 2 SUSTAINABLE BUILDING POLICY

Adopt a policy that would require all City of Seattle new construction and major renovation projects to be designed and built in a sustainable manner.

One way to encourage the building industry to build more sustainably is to lead by example. Requiring that all new and renovated City buildings be sustainably designed sends a clear message of the City's support of and belief in these principles. It can also prove the cost-effectiveness of resource-efficient technologies to the industry. Adopting a sustainable building policy will also enable Seattle to be a national and international model in this field.

Preferred Strategy

The City's Environmental Management Initiative (EMI) is in the process of developing a broad resource-efficient building policy. Members of the Task Force could assist the EMI in developing a City Council ordinance or other appropriate decree to require that all new City of Seattle construction projects meet the performance guidelines established in the Primer or existing criteria developed by other organizations. The City also needs to ensure that the policy is implemented and enforced by providing outreach and resources to City project teams.

Develop New Policy

Timeline: 6 months to draft, review and adopt the policy.
Est. Cost: \$0.00
City Staff: 0.10 FTE (lead); 0.05 for 1-2 FTEs (oversight)

Conduct Outreach to City Project Teams

Timeline: 6 months following development of the Primer
Est. Cost: < \$1,000 to develop information packets (using existing resources, such as the Primer and incentive programs)
City Staff: 0.15 FTE (lead); 0.10 for 1-2 FTEs (team)

Recommendation 3 **CODE REVIEW**

Review existing codes, regulations and other requirements that pertain to the building industry to identify those which conflict with sustainable building principles and to determine if any of the requirements can be modified to facilitate sustainable building.

The building industry must comply with a tremendous amount of codes, regulations and other requirements, some which may be inconsistent with sustainable building practices. Some of these, however, are merely perceived but not real inconsistencies. For example, some argue that the City's low bid process is an impediment to hiring quality teams that would design and build more resource-efficient buildings. In fact, the City's bid process enables the inclusion of specific criteria, such as sustainable building elements, to ensure that the *best* and lowest bid is selected. Other codes may in fact be inconsistent with green building but may serve a purpose which overrides sustainable building goals. On the other hand, some conflicting codes may have outlived their usefulness.

Preferred Strategy

Form a small subcommittee composed of City staff to:

- Hire a consultant to conduct focus groups of key stakeholders in the building industry to identify the main regulatory barriers to sustainable building. Have one focus group composed of “green” architects and builders to determine the challenges they’ve faced and how they’ve been able to overcome regulatory obstacles.
- Have the consultant develop a simple questionnaire targeted at a larger audience in the building industry to identify the main regulatory barriers to sustainable building. Send the questionnaire via direct mail or include in DCLU’s newsletter.
- Compile the responses to the questionnaire and research the top barriers identified to determine which ones are real and which are only perceived to be conflicts. Resolve the perceived conflicts and include this information in a marketing campaign, as described in Recommendation 5. Evaluate the real conflicts and develop recommended changes where appropriate.

Timeline: 8-12 months
Est. Cost: \$15,000 (consultant)
City Staff: 0.20 FTE (lead); 0.15 for 3 FTEs (oversight)

Alternative Strategy

Have City staff perform the work described in under the Preferred Strategy.

Timeline: 8-12 months
Est. Cost: <\$1,000 (survey)
City Staff: 0.25 FTE (lead); 0.20 for 3 FTEs (oversight)

Recommendation 4 RESOURCE CENTER



Establish a one-stop-shopping resource center to meet local needs for use by the building industry and general public.

Providing a locale where developers, designers, contractors, do-it-yourselfers, and others can access a variety of information about sustainable building is an item strongly recommended by the Task Force and Advisory Group. It can be extremely time consuming to research applicable codes, available products, design specifications, incentive programs, etc. because most of this information is widely dispersed throughout the City, nation, and the world. In addition, because there is so much available information, it is time-consuming to separate out the useful from the not-so-useful information.

Therefore, what is needed is a one-stop-shopping resource center that provides the latest, most relevant information, including:

- City and private sectors resources (e.g. City incentive programs, consultants, certification programs)
- Local case studies/projects information
- Codes pertaining to sustainable building
- Computer databases (e.g. product listings)
- Software/modeling programs
- Publications (e.g. books, magazines)
- Product samples/materials and literature
- Sample specifications/standards
- Knowledgeable staff to provide technical assistance/consultations

Preferred Strategy

The City of Seattle should take the lead in establishing a regional resource center(s) that involves, at a minimum, King County, and perhaps Snohomish and Pierce Counties. Support should also be solicited from trade organizations, such as Associated General Contractors and American Institute of Architects, and from other potential funding sources, such as grants. Because these trade organizations and the building industry as a whole do not confine their activities to the City of Seattle, a regional resource center is preferable to a City resource center.

The resource center could be phased in, starting with a small center with some of the key published information, software programs and product samples. Later, more resources, including staff, could be added. A staffed resource center offers an additional benefit of providing users with technical assistance on specific projects. Industry representatives have stated that this is a valuable way to facilitate green building efforts and to sell the idea to their clients.

The resource center should be located in an area which the building industry frequents, such as next to a building permit office. The Task Force recommends against locating the resource center in a permit office. Doing so would cause many in the industry to associate the resource center with the permit process, making it appear that green building is yet another requirement imposed by government. Although it would not be a required part of the permit process, the resource center would need to be coordinated with the permit process in order to prevent problems and facilitate implementation of sustainable building measures. For example, resource center staff who provide green building technical advice to design teams could also give advice

on how to work with building inspectors, design review boards and others in approving their plans.

The resource center could be a single, larger, centralized facility or a collection of smaller branches dispersed throughout the region, or a combination of the two.

Phase I - Smaller, Unstaffed Center(s)

Timeline: 1 year to establish
Est. Cost: \$25,000 - 50,000 (resources, equipment) plus potential rental space and consultant fees⁶
City Staff: 0.30 FTE (lead); 0.15 for 2-3 FTEs (oversight)

Phase II - Larger, Staffed Center(s)

Timeline: 1 year to establish
Est. Cost: \$150,000+ (1-2 FTEs per site, overhead, supplies) plus potential rental space⁷
City Staff: 0.20 FTE (lead); 0.10 for 2-3 FTEs (oversight)

Alternative Strategies

(1) Establish a City of Seattle resource center near the Department of Construction and Land Use, the Lighting Design Lab or other facility frequented by the building industry. Phase in the resource center as described in the Preferred Strategy, with the ultimate goal of having a staffed resource center.

Phase I - Smaller, Unstaffed Center

Timeline: 8-12 months to establish
Est. Cost: \$25,000 - 50,000 (resources, equipment) plus potential rental space and consultant fees
City Staff: 0.20 FTE (lead); 0.10 for 2-3 FTEs (oversight)

Phase II - Larger, Staffed Center

Timeline: 1 year to establish
Est. Cost: \$75,000 - 150,000 (1-2 FTEs per site, overhead, supplies) plus potential rental space
City Staff: 0.20 FTE (lead); 0.10 for 2-3 FTEs (oversight)



(2) Establish a “virtual” resource center -- in other words, a web site containing many of the resources listed on the previous page. The disadvantages are that the amount of information that can be provided

⁶ Costs will increase if more than one branch is established.

⁷ Costs will increase if more than one branch is established.

via the internet is limited, and two-dimensional information is often not as beneficial as seeing and touching the real thing. Moreover, the US Green Building Council is in the process of developing a national virtual resource center on its site.

Timeline: 4-6 months to develop web site. Must be maintained and updated regularly.
Est. Cost: \$0.00 (Use in-house Information Technology staff to provide technical assistance/consultation).
City Staff: 0.20 FTE (lead); 0.10 for 2-3 FTEs (oversight)

Recommendation 5 EDUCATION

Conduct an education and outreach campaign to City staff and industry groups.

Opportunities to provide education and outreach about sustainable building practices and technologies still abound. Over the past few years, the City has provided technical assistance to the building industry and offered a variety of workshops. These types of efforts are effective and should continue. In addition, the City needs to educate itself by providing workshops or other educational forums to appropriate staff, such as building inspectors, utility staff, and housing officials. One common complaint voiced by the industry is the lack of familiarity of green building practices and technologies by building inspectors and examiners. As a result, some ideas fail to receive approval and thus are not implemented.

Preferred Strategy

Form a small subcommittee of City staff to develop an interdepartmental, integrated workplan to conduct educational forums to appropriate City staff, industry groups (eg. trade organizations), and design teams working on specific projects. Solicit ideas for this plan from the industry. The plan should determine who will conduct the forums (such as a consultant), the structure and content of the forums, and funding mechanisms. Then implement the education workplan.

Phase I - Develop Integrated Education Workplan

Timeline: 2-3 months
Est. Cost: \$0.00
City Staff: 0.10 FTE (lead); 0.05 for 3-4 FTEs (oversight)

Phase II - Implement the Workplan

Timeline: 1-2 years
Est. Cost: \$10,000+
City Staff: unknown

Recommendation 6 INCENTIVES



done by reducing

Integrate and streamline current City incentive programs and consider offering new incentive programs.

In order for incentive programs to be as effective as possible, they first need to be easily accessible and user-friendly. Currently, many incentive programs are dispersed among various City departments and some require a significant amount of paperwork. The City needs to provide one-stop-shopping for existing incentive programs (via DCLU or the resource center, for example) and ensure that the programs are efficiently administered. This can be

the turnaround time and the paperwork involved.

In addition to integrating current programs, the City should also examine the idea of providing new incentive programs for developers as well as other team members, such as designers and contractors. The following are examples of the kinds of incentives which the City may want to look at:

- Include sustainable building in existing development bonuses programs;
- Provide green utility rates to building owners that conserve resources;
- Provide designers with a portion of savings from decreased utility bills;
- Ensure that sustainable building projects will not take any longer to be approved in the permitting process.

Preferred Strategy

Form a small subcommittee of City staff to review existing City incentive and technical assistance programs regarding energy efficiency, water conservation, and solid waste to determine if any could be streamlined. Integrate the programs into a single incentives package. Tailor the packages to specific project types, such as a commercial projects package. Make the package available through the permit office, resource center or other convenient location that the building industry frequents. Also make the package, or information about it, available on a web site. Ensure that all City staff delivering programs are constantly aware of each others' programs. Perhaps hold an annual meeting to share information.

Research the practicality and desirability of offering new incentive programs. Seek input from the building industry on these issues. Develop a set of proposals based on that research and submit to City policy makers.

Streamline Existing Programs

Timeline: 4-6 months
Est. Costs: \$0 - 5,000 (redesign, reprint)
City Staff: 0.20 FTE (lead); 0.10 for 2-3 FTEs (oversight)

Research New Programs

Timeline: 4-6 months
Est. Costs: \$0.00
City Staff: 0.20 FTE (lead); 0.10 for 2-3 FTEs (oversight)

Alternative Strategy

Use City staff to develop a list of incentive programs with contact information and make the list available through the permit office, resource center or other convenient location that the building industry frequents. Also make the list available on a web site.

Hire a consultant to research the practicality and desirability of offering new incentive programs, with input from the building industry and City staff. Develop a set of proposals based on that research and submit to the City.

Develop Resource List

Timeline: 1-2 months
Est. Costs: <\$1,000 (printing)
City Staff: 0.10 FTE (lead); 0.05 for 2-3 FTEs (oversight)

Research New Programs

Timeline: 6 months
Est. Costs: \$10,000 - 15,000 (consultant)
City Staff: 0.10 FTE (lead); 0.05 for 2-3 FTEs (oversight)

Recommendation 7 MARKETING CAMPAIGN



Develop a marketing strategy and launch a campaign to increase consumer demand, to educate the industry about sustainable building and to publicize the Primer, the Resource Center, educational forums, incentive programs, and other services and programs.

Once the Primer and Resource Center have been established, the City should promote both of these as a way to educate the building industry about sustainable building in general, and the performance guidelines in particular. Furthermore, the City should promote other City programs and services, such as the educational forums and incentive programs. The City should target the general public to increase consumer demand for green building services and products, and it should target other groups, such as financial companies, to raise awareness. In doing all this, the City should coordinate with other groups that are also undertaking marketing efforts, such as trade associations or environmental programs. The City may be able to secure some funding from suppliers and service providers.

In developing its marketing campaign, the City should develop a logo, slogan and professional identify as a means of creating a “brand” for sustainable building. Ideas include:

- Press releases; public service announcements; advertisements
- Articles in trade newsletters, home and garden magazines
- Direct mail to targeted audiences
- Presentations to industry groups and students

Preferred Strategy

Hire a consultant to create a brand (logo, slogan) for sustainable building, develop a marketing plan, develop other tools to implement the plan (such as brochures), and carry out the plan.

Branding Exercise

Timeline: 6-8 months
Est. Cost: \$10,000 - 20,000 (consultant)
City Staff: 0.10 FTE (proj mgr); 0.05 for 2-3 FTEs (oversight)

Develop and Implement Marketing Plan

Timeline: 6-8 months to develop a marketing campaign
Est. Cost: \$25,000 (consultant, advertising, etc.)
City Staff: 0.15 FTE (proj mgr); 0.10 for 2-3 FTEs (oversight)

Alternative Strategy

Use City staff (City graphic designers, public relations staff, etc.) to conduct the work.

Timeline: 6-8 months to develop a marketing campaign
Est. Cost: \$10,000 - 15,000 (graphics, printing)
City Staff: 0.20 for 2 FTEs (lead and PR staff); 0.10 for 2-3 FTE (oversight)

Recommendation 8 AWARDS



Recognize outstanding green projects and continue to provide the information on sustainable building through an annual or biennial conference and awards event.

One incentive that helps generate and maintain interest in sustainable building is to recognize outstanding projects and achievements. An awards program for some of the top green projects and companies could be part of a large annual or biennial conference, workshop or other educational event. Public recognition provides designers, developers, contractors and other companies with a marketing tool and competitive edge. Providing the latest sustainable building information in a conference-like setting is another effective tool in generating interest and enthusiasm. Showcasing award-winning sustainable building in local architectural and home magazines and other print media provides an additional benefit of generating broad public awareness.

Preferred Strategy

Piggy-back and expand the scope of an existing conference/workshop/awards program, such as the Architecture and Engineering Awards. Send out press releases and write articles showcasing award-winning projects.

Every two years, provide a day of sustainable design and construction workshops and seminars, along with an awards ceremony for the building industry, both public and private sectors. Ensure good publicity and high visibility for the event.

Timeline: 6 months to plan, develop, and publicize a one-day conference and awards event.
Est. Cost: \$50,000 - 75,000
City Staff: 0.25 FTE (lead); 0.15 for 2-3 FTEs (oversight)

Alternative Strategy

Repeat the Sustainable Building Northwest Conference every 3 years and include an awards ceremony. This was a 3-day regional event sponsored by the City in 1997 that some 500 people attended. During off-years, offer an awards ceremony only.

Conference and Awards

Timeline: 1 year to plan, develop, and publicize
Est. Cost: \$150,000 - 200,000
City Staff: 0.25 FTE (lead); 0.15 for 2-3 FTEs (oversight)

Awards Only

Timeline: 3 months to plan, develop, and publicize
Est. Cost: \$10,000
City Staff: 0.20 FTE (lead); 0.10 for 2-3 FTEs (oversight)

Recommendation 9 EVALUATION



Evaluate and update the performance guidelines outlined in the Sustainable Building Primer every two years.

Building technologies, products and regulations change constantly. To keep up with these changes, the performance guidelines in the Sustainable Building Primer should be evaluated and modified every other year. This will enable Seattle to continually raise the bar and stay in the forefront of sustainable building efforts. In time, sustainable building may become part of the normal course of doing business and the performance guidelines and other City programs may no longer be necessary.

Preferred Strategy

Every two years (or as long as necessary), form a small committee comprised of public and private sector representatives (with a City staff as the lead) to review the performance guidelines and propose changes. Have a larger group of key stakeholders review and comment on the recommendations; perhaps tying in with the biennial conference as described in Recommendation 8. Formally adopt the changes and professionally edit and publish the new Primer. Promote and distribute the Primer to the building industry, per Recommendation 7.

Have the committee also evaluate the City's sustainable building programs and services and propose changes to the scope of work, with review from the larger group.

Timeline: 4-6 months

Est. Cost: <\$5,000 (reprint Primer)
City Staff: 0.20 FTE (lead); 0.10 for 1-2 FTEs (oversight)












Alternative Strategy

Hire a consultant to review the Primer, make recommended changes, circulate for review, edit and publish. Use City staff to evaluate the current scope of work and propose changes.

Timeline: 2-3 months to review, propose and adopt changes to the performance guidelines and to evaluate the City's scope of work. 1-2 months to publish and distribute Primer.

Timeline: 4-6 months
Est. Cost: \$10,000 (consultant, printing)
City Staff: 0.10 FTE (proj mgr); 0.05 for 1-2 FTEs (oversight)

III. TIMELINE AND COSTS SUMMARY

Recommended Action Item	Estimated Costs (Preferred Altern.)	Proposed Timeline: 1998-99
		Mr Ap My Je Jl Ag Sp Oc No De Ja Fb Mr Ap My Je Jl Ag Sp Oc No De
1. Primer	\$10,000 - 15,000	
2. Sustainable Building Policy	\$0	
3. Code Review	\$15,000	
4. Resource Center Phase I Phase II	\$25,000 - 50,000 \$150,000+	 Year 2000
5 Education & Outreach Develop Workplan Implement Workplan	\$0 unknown	 
6. Incentives Streamline Programs Research New Incentives	\$0 - 5,000 \$0	 
7. Marketing Campaign Branding Implementation	\$10,000 - 20,000 \$25,000+	 
8. Awards & Workshops	\$50,000 - 75,000	
9. Evaluation	<\$5,000	Year 2000

APPENDIX

TASK FORCE

Melina Thung (chair)	Seattle Public Utilities
Lynne King (vice-chair)	Sellen Construction Company
Tom Paladino (vice-chair)	Paladino Consulting
Diana Campbell	Seattle City Light and Lighting Design Lab
Jerry Day	McKinstry Company
John Flynn	Seattle City Light
Barbara Freeman	Urban Design Consulting
Joel Horn	Wright Runstad & Company
Margaret Hoselton	NBBJ
Alan Justad	Seattle Department of Construction and Land Use
Pat Gibbon	Seattle Department of Housing and Human Services
Gary Lawrence	Institute for Public Policy & Mgmt; Global Envir. Bureau, USAID
Shelley Lawson	Seattle Public Utilities
Joel Loveland	UW College of Architecture and Urban Planning
Cliff Marks	Seattle Office of Management and Planning
Richard Putnam	US Department of Energy
Vaughn McLeod	Housing Resource Group
Eric Overton	Sparling Inc.
Michael Read	Seattle Design Commission
Marcia Wagoner	Seattle Design Commission

ADVISORY GROUP

Elizabeth Daniel	Chamber of Commerce, Business & Industry Recycling Venture
Kim Drury	Executive Department, Environmental Management Initiative
John Eskelin	Neighborhood Planning Office
Paul Fleming	Seattle Public Utilities
Karen Gordon	Department of Neighborhoods
Margaret Klockars	Law Department, Land Use Section
Kris Koefed	Seattle Planning Commission
Joy Okazaki	Parks Department, Facilities Maintenance and Development
Sue Partridge	Executive Services Department, Facility Services Division
Mike Purdy	Seattle Public Works & Consultant Contracting
Troy Bloedel	Holaday Parks, Inc.
Ray Cole	University of British Columbia School of Architecture
Lee Hatcher	Sustainable Seattle
Mason Huffine	The Green Handy Person; Northwest EcoBuilding Guild
David Miller	The Miller Hull Partnership
Kenichi Nakano	Seattle Planning Commission; Nakano Dennis Landscape Architects
Jim Ruppel	Advanced Technologies
Fay Weaver	The Boeing Company
James Wise	Eco Integrations, Inc.